



Presented By

Shahryar Khan, ITU Expert

Email:

shahryar2001@gmail.com

Phone: +_92-300-5230737



ITU-FAO-DOA-TRSCL training on
Innovation and application Development
for e-agriculture

BUSINESS OPTIMIZATION IN AGRICULTURE USING ICTS

KANDY, SRI LANKA



AGENDA



Challenges in agriculture



Opportunities in agriculture



Use of ICTs in agriculture



Programs available for incubation of agro-businesses



Promotion branding and Marketing



Increasing exports and access to international markets



Conclusions



AGRO SUPPLY CHAIN





CHALLENGES



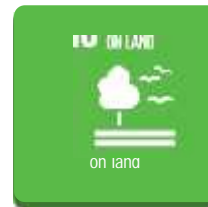
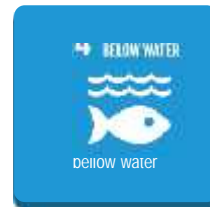
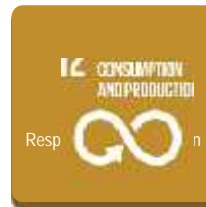
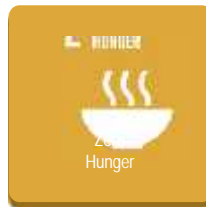
- Lack of GAP and market information
- Lack of access to technology - Digital divide
- Improving earning opportunities for rural farmers
- Lack of access to financial services
- Lack of food traceability
- Food Loss and Wastage
- Urbanization
- Droughts due to Climate change



FOOD WASTAGE



- One third of the food produced globally gets wasted
- This cost food industry 1 trillion USD in losses annually
- Current world population is 7.5 billion
- Globally 800 million people are undernourished
- World population to reach 8.5 billion by 2030
- Need to feed additional 1 billion people





URBANIZATION



- By 2050 70% of world population will be living in urban areas
- 18.2 % of Sri Lanka population live in Urban areas
- Lack of interest of youth in farming
- Youth migrating to urban areas for better opportunities
- Huge challenge for food logistics



DROUGHTS DUE TO CLIMATE CHANGE



Sri Lanka this year has faced what United Nations officials described as the worst drought in 40 years

Climate change-fueled drought drives Sri Lanka's farmers to cities

REPORT from [Reuters - Thomson Reuters Foundation](#)

Published on 02 Nov 2017 — [View Original](#)

by Amantha Perera | [@AmanthaP](#) | Thomson Reuters Foundation

COLOMBO, Nov 2 (Thomson Reuters Foundation) - When Siri Hettige, a sociology professor at Colombo University, conducts surveys of young people across Sri Lanka, he never fails to ask one key question: Does anybody want to become a farmer?

No, has been the overwhelmingly emphatic answer, he said.



SMALL HOLDER LIVELIHOOD



Assumptions



- Yield: 4000 Kg/ hector
- Rs. 50/ Kg



A rice farmer needs



2 harvests



a year on

2.6 acres
(1 hectare)



needed to keep a family
of four above the country's
poverty line.

\$115
a month



of land to earn the
17,760 rupees



Due to drought in 2017
production is down by 35%
compared to last year.



A maize farmer needs
even more land



about
3.7 acres

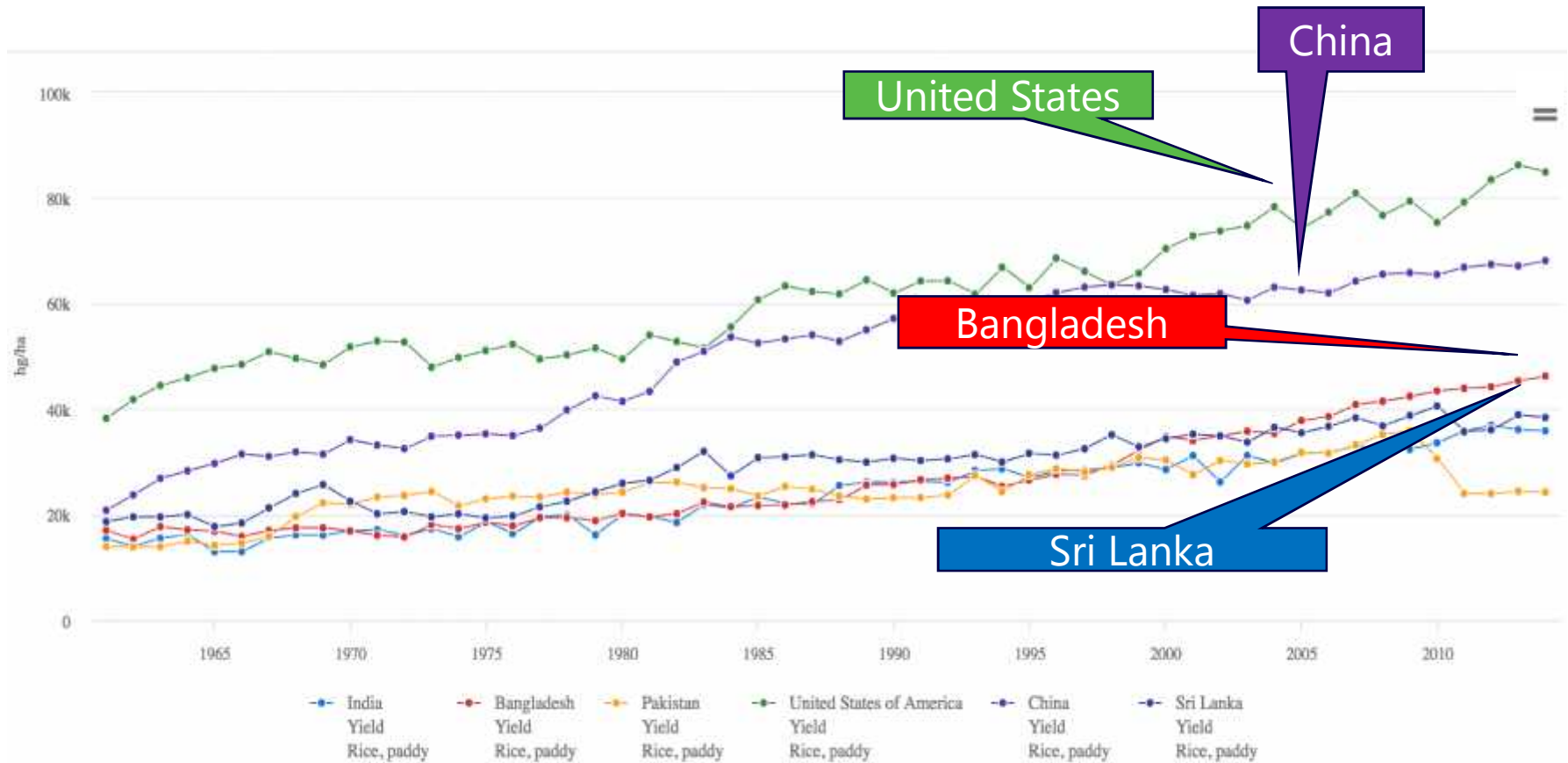




PADDY RICE YIELD



Time series on selected data





OPPORTUNITIES



**Grow
more with less
resources**

**Increase
transparency
in Supply
Chain**

**Financial
inclusion for
rural farmers**

**Using ICTs and
mobile apps to
disseminate GAP
information**



GROW MORE WITH LESS



- Grow more with less resources (land and water)
- Climate Smart agriculture
- Micro irrigation
- Vertical farming
- Seeds with Increase yield
- Conservation agriculture



FINANCIAL INCLUSION



- Bank accounts are relatively high but usage low
- Mobile bank accounts can better server rural farmers
- Mobitel mCash launched in 2013
- The government will encourage innovation in mobile payments



Money in your mobile



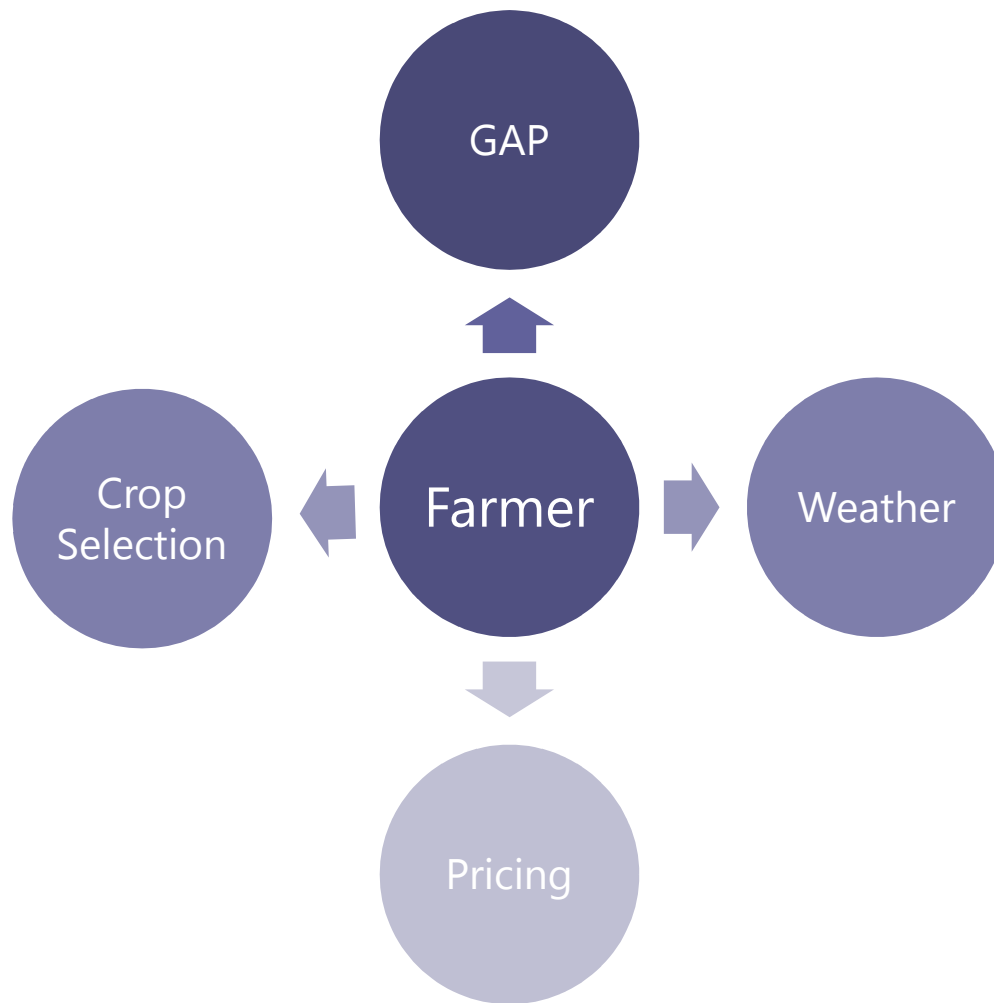
INCREASE TRANSPARENCY



- Increase transparency in Supply chain
- The currently supply chain is inefficient & opaque
- Using DLT will establish trust in Supply chain
- Customer gets all the information by scanning a QR code



ICTS IN AGRICULTURE





ICTS FOR GAP CONTENT



SL-GAP



Sinhala

Tamil

English

Agri-Business Counselling Unit

Department of Agriculture

- Currently DOA provide GAP information to 2000 farmers
- CAB officers/ Extension workers provide GAP to farmers
- Target is to reach 100,000 farmers
- Increasing CAB officers is not scalable
- Only way is to use ICTs and mobile apps to increase reach



SL-GAP ANDROID APP



SL-GAP



Sinhala

Tamil

English

Agri-Business Counselling Unit
Department of Agriculture



How to Register as a... Commercial Farmer

Step 1

Farmer Fills Commercial
Farmer Application Form
and Hand Over to CAB /
TAAB Officer

Next

Back to menu

Back to Home Page

Agri-Business Counselling Unit
Department of Agriculture



SL-GAP Certification Portal



SLGAP Certif Farmers

Dept Agriculture

Back to menu

Back to Home Page

Agri-Business Counselling Unit
Department of Agriculture



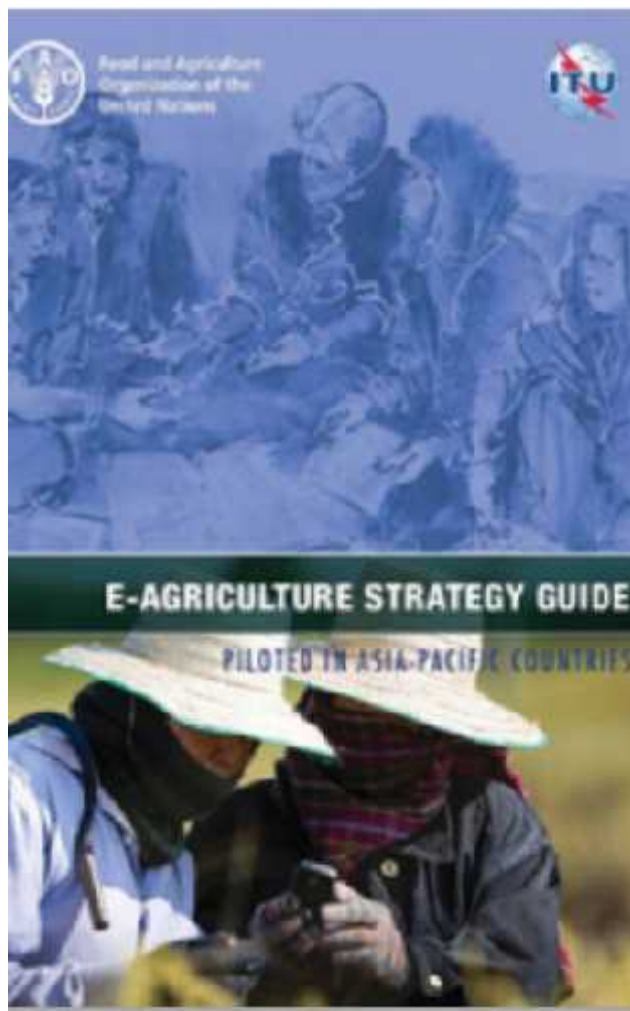
PROGRAMS FOR AGRO BUSINESS INCUBATION



- Lanka Social Ventures
- Rural Enterprise Network
- Offers business incubation facility for rural producers
- Helps them access local and international markets
- Helps them with a common REN brand
- Helps them with better processing and packaging techniques



SRI LANKA eAGRICULTURE STRATEGY

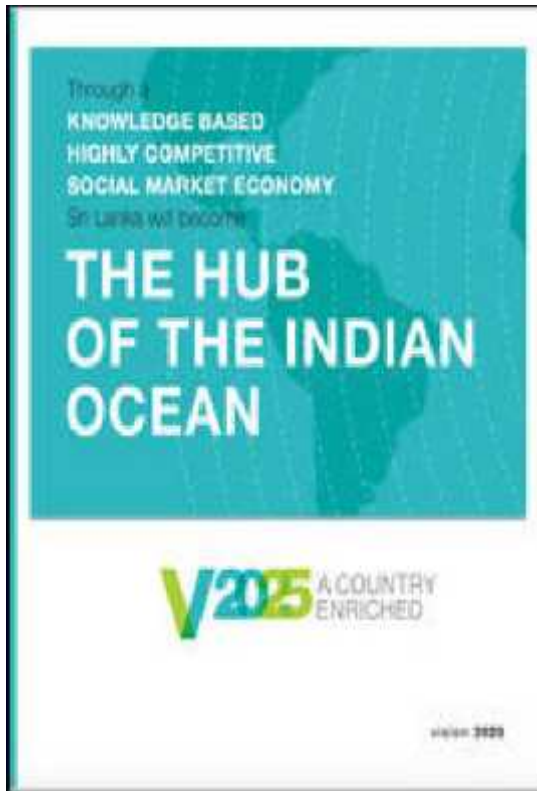


- Jointly developed by ITU and FAO in June 2016
- Based on eAgriculture strategy guide
- Identifies 97 challenges
- 48 ICT solutions are identified
- 9 strategic recommendations

“Excellence in adopting e-solutions to transform agriculture for national prosperity”



SMART SRI LANKA 2025



- Facilitate efficiency in agricultural markets
- Will help smallholders in tea, rubber exports
- Takes steps to improve disaster management
- Will encourage innovation in mobile payments



EXPORTS AND ACCESS TO INTERNATIONAL MARKETS



- Need to follow GAP to be export compliant
- Usage of dangerous chemicals and pesticides
- Lack of post-harvest technologies



CONCLUSIONS



- Use of ICTs can increase agricultural efficiency
- Need to improve productivity and earnings for small holders
- Farmer needs to have access to financial services



ACTIVITY



- Create a Website in Wordpress
- 29% of websites on internet are powered by Wordpress
- FREE tool to create website with no knowledge of HTML

Questions?

THANK YOU

